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EXAMINER	
TRAN, BANGLONG	
ART UNIT	PAPER NUMBER
2458	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/729,464	HORVITZ ET AL.	
	Examiner	Art Unit	
	BANGLONG TRAN	2458	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 May 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-84* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1-35, 37, 38, 41-69, 71, 74-84* is/are rejected.

7)☒ Claim(s) *36,39,40,70,72 and 73* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *05/21/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-84 are pending.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 1, 43, 79 and 80 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1, 79, and 80 are not limited to tangible embodiments. The claims recited " An analysis system, comprising: a control component....an analysis component...., means....a first component ...a second component..." are just limited to a functional descriptive material consisting of computer program per se ([0027], lines 1-7, i.e., component is intended to refer to software, a program, an object, an executable…), Instead of being defined as including tangible embodiments (i.e., a computer readable storage medium such as memory device, storage medium, etc.,). As such, the claims are not limited to statutory subject matter and are therefore non-statutory.

Claim 43 is a method claim but not tied to any particular machine or transform underlying subject matter (such as an article or material) to a different state or thing. Therefore, the claimed invention is directed to non-statutory subject mater.

Claims 2-42, 82 and 84 depending upon claim 1, claims 44-78 and 83 depending upon claim 43 are also rejected under 35 U.S.C. 101 as applied to claims 1 and 43 above.

Allowable Subject Matter

4. Claims 36, 39, 40, 70, 72, 73 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 2, 5, 6, 7, 8, 9, 17, 18, 23, 24, 79, 82, 84 are rejected under 35 U.S.C. 102(e) as being anticipated by Freedman et al. (hereinafter Freedman), U.S Publication No. 20040249650.

7. As to claim 1, Freedman discloses an analysis system, comprising:

a control component (Fig.2B, multi segment interaction capture device 280; [0040], line 43) that selectively gathers perception evidence ([0040], lines 43-56, i.e.,

capturing any information segments in a coded data format such as audio data, video data…) to limit utilization of computing resources by a perception system ([0039], lines 45-49; [0063], lines 39-45, i.e., reducing size and cost on computer resources, saving power); and

an analysis component (Fig.2B, rule based analysis engine 218; [0041], lines 1-2) that utilizes an analysis policy to analyze the perception evidence obtained for employment in the perception system ([0041], lines 7-9; [0051], lines 35-40, i.e., applying rule based analysis to content data, analyzing the received audio segments); the analysis component is interactive with the control component for perception evidence analysis operations ([0038], lines 34-45,i.e., interaction 20 being captured and fed to analysis engine component).

8. As to claim 2, Freedman discloses the analysis component employing, at least in part, learned inferences relating to persistence ([0051], lines 9-12) versus volatility of observational states to account for unobserved data ([0039], lines 40-43).

9. As to claim 5, Freedman discloses the control component employing a criticality level of at least one user task to limit utilization of computing resources by the perception system ([0039], lines 47-49).

10. As to claim 6, Freedman discloses the control component limiting utilization of computing resources based upon context ([0062], lines 5-11; [0073], lines 14-17).

11. As to claim 7, Freedman discloses the control component limiting utilization of computing resources by controlling what analysis policy is employed ([0062, lines 41-46).

12. As to claim 8, Freedman discloses the selection of the analysis policy based on context information ([0062], lines 129-133).

13. As to claim 9, Freedman discloses the system of claim 1, further comprising at least one perception sensor to provide the perception evidence for the perception system ([0039], lines 9, i.e., voice 332, video 334 implying microphone and camera such as webcam).

14. As to claim 17, Freedman discloses the perception evidence analysis operations comprising analysis policy selection control operations between the control component and the analysis component ([0039], lines 68-76).

15. As to claim 18, Freedman discloses the perception evidence analysis operations comprising perception evidence related information exchanges between the control component and the analysis component (0042], lines 17-24, i.e., content information captured by device 280, save to database 272, 274, then processed by device 246, later to be analyzed by rule base engine 218 to produce result).

16. As to claim 23, Freedman discloses the analysis policy comprising a context-based analysis policy ([0045], lines 1-4, 6-9).

17. As to claim 24, Freedman discloses the analysis policy comprising a random selection perception policy that randomly selects which features to utilize on a frame by frame basis ([0073], lines 17-24).

18. As to claim 79, Freedman discloses a data analysis system, comprising:

means to selectively gather perception evidence obtained for employment via a perception system ([0040], lines 43-56, i.e., capturing any information segments in a coded data format such as audio data, video data…) to limit utilization of computing resources by the perception system ([0039], lines 45-49; [0063, lines39-45, i.e., reducing size and cost on computer resource, saving power); and

means to analyze the perception evidence utilizing an analysis policy employed ([0041], lines 7-9; [0051], lines 35-40, i.e., applying rule based analysis to content data, analyzing the received audio segments) to facilitate in limiting utilization of the computing resources ([0039], lines 45-49, i.e., reducing size and cost on computer resource).

19. It would have been obvious to the one skilled in the art at the time of the invention to utilize a computer readable medium having stored thereon computer executable components of the system of claim 1.

20. As to claim 84, Freedman discloses a device employing the system of claim 1 comprising at least one selected from the group consisting of a computer, a server, and a handheld electronic device ([0038, lines 59-67, i.e., Computer Telephony Integration (CIT) is the use of computers to manage telephone calls...).

Claim Rejections - 35 USC § 103

21. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

22. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Freedman as applied to claims 1 and 2 above, in view of Bernhard Kammerer (hereinafter Kammerer), U.S Publication No. 20040249639.

23. As to claim 3, Freedman discloses the invention as described in claims 1 and 2 above. Freedman does not disclose the learned inferences based, at least in part, on a probability distribution over future states based on at least one previously observed

value that is captured by at least one function of time. However, Kammerer discloses the learned inferences based, at least in part, on a probability distribution ([0085], lines 11-12) over future states based on at least one previously observed value that is captured by at least one function of time ([0085], lines 12-16, i.e., going initially from the start state via the middle state to the end state).

It would have been obvious to the on skilled in the art at the time of the invention to combine the teaching of Freedman with the teaching of Kammerer to have the learned inferences based, at least in part, on a probability distribution over future states based on at least one previously observed value that is captured by at least one function of time. Because it would provide users important advantages result if the individual speech modules of a reference model, such as a word for example, are for example a phoneme, a diphone, a triphone or a syllable. That is to say it is possible to combine the advantages of DTW (dynamic time warping) and HMM (hidden Markov modeling) systems by on the one hand retaining the time structure but on the other hand also being able to generate reference models for new words from existing syllables [0023].

24. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Freedman and Kammerer as applied to claims 1, 2 and 3 above, in view of NPL published by Wolfram Research, Inc © 1999-2009 (hereinafter Wolfram).

25. As to claim 4, Freedman and Kammerer disclose the invention as described in claim 1, 2 and 3 above. Freedman and Kammerer do not disclose the probability distribution comprising a Gaussian distribution:

$$P(x) = \frac{1}{\left(2\pi\sigma(t)^2\right)^{1/2}} \exp\left\{-\frac{(x-\mu)^2}{2\sigma(t)^2}\right\}$$

where μ is a mean value and σ (t) is a standard deviation at time "t".

However, Wolfram discloses as equation (1).

It would have been obvious to the one skilled in the art at the time of the invention to combine the teaching of Freedman, Kammerer with the teaching of Wolfram to have the above Gaussian distribution. Because it would provide users the marginal distribution over function values at any finite set of points can be specified. This enables us to focus on the variables of interest.

26. Claims 10, 11, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freedman as applied to claims 1 and 9 above, in view of Block et al. (hereinafter Block), U.S Publication No. 20040059466.

27. As to claim 10, Freedman discloses the invention as described in claim 1 and 9 above. Freedman does not disclose the control component limiting utilization of computing resources by facilitating control of at least one selected from the group

consisting of an analysis process for at least one perception sensor ([0008], lines 8-15) and a focus of attention of at least one perception sensor ([0008], lines 23-29).

It would have been obvious to the one skilled in the art at the time of the invention to combine the teaching of Freedman with the teaching of Block to have the control component limiting utilization of computing resources by facilitating control of at least one selected from the group consisting of an analysis process for at least one perception sensor and a focus of attention of at least one perception sensor. Because it would provide users at least one sensor configured to detect the presence of an animal [0003].

28. As to claim 11, Freedman discloses the invention as described in claim 1 and 9 above. Freedman does not disclose the control component limiting utilization of computing resources by controlling what perception sensors are employed. However, Block discloses the control component limiting utilization of computing resources by controlling what perception sensors are employed ([0008], lines 43-46).

The motivation of this claim is as same as the one of claim 10 above.

29. As to claim 12, Freedman discloses the invention as described in claim 1 and 9 above. Freedman discloses the perception sensor comprising at least one selected from the group consisting of a video camera ([0039], line 9, i.e., source video 334 implying video camera, an audio microphone ([0039], line 9, i.e., source voice 332 implying a microphone, a keyboard keystroke sensor, a mouse utilization sensor ([0039], lines 10

e-mail services 336, chat messages 338 implying keyboard and mouse). Freedman does not disclose a motion detector. However, Block discloses a motion detector ([0008], lines 14-15).

The motivation of this claim is as same as the one of claim 10 above.

30. As to claim 13, Freedman discloses the invention as described in claim 1 and 9 above. Freedman discloses. Freedman discloses at least one state of at least one selected from the group consisting of at least one data structure within a computing system and at least one application activity within a computing system ([0062],lines 68-70). Freedman does not disclose the perception sensor comprising a detector. However, Block disclose the perception sensor comprising a detector ([0008], lines 14-15).

The motivation of this claim is as same as the one of claim 10 above.

31. Claims 14, 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freedman as applied to claim 1 above, in view of Nosa Omoigui (hereinafter Omoigui), U.S Publication No. 20080162498.

32. As to claim 14, Freedman discloses the invention as described in claim 1 above. Freedman further discloses a user interface component relating to user perception preferences to the perception system ([0039], line 13, i.e., web browsing 344 embedded in apparatus 100 of fig.2A). Freedman does not disclose at least one user to relay

information. However, Omoigui discloses at least one user to relay information ([0777], lines 4-7).

It would have been obvious to the one skilled in the art at the time of the invention to combine the teaching of Freedman with the teaching of Omoigui to have at least one user to relay information. Because it would provide users multiple client access means of communication between diverse knowledge information sources via an independent Semantic Web platform or via a traditional Web portal (e.g., Today's Web access browser) as modified by the present invention providing additional SDK layers that enable programmatic integration with a custom client [0055].

33. As to claim 15, Freedman discloses the invention as described in claim 1 and 14 above. Freedman further discloses limiting utilization of computing resources by the perception system ([0039], lines 45-49). Freedman does not disclose the control component employing at least one user perception preference. However, Omoigui discloses the control component employing at least one user perception preference ([0777], lines 14-18).

The motivation of this claim is as same as the one of claim 14 above.

34. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Freedman and Omoigui as applied to claims 1 and 14 above, in view of Hasan Mahmoud et al. (hereinafter Hasan Mahmoud), U.S Publication No. 20030112762.

35. As to claim 16, Freedman and Omoigui disclose the invention as described in claim 1 and 14 above. They do not disclose the user perception preferences comprising values of cost for utilizing computing resources. However, Hasan Mahmoud discloses the user perception preferences comprising values of cost for utilizing computing resources ([0050], lines 11-16).

It would have been obvious to the one skilled in the art at the time of the invention to combine the teaching of Freedman, Omoigui with the teaching of Hasan Mahmoud to have the user perception preferences comprising values of cost for utilizing computing resources. Because it would provide users an improved method of radio resource management for integrated voice and data code division multiple access (CDMA) networks [0014].

36. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Freedman as applied to claim 1 above, in view of Steven A. Wright (hereinafter Wright), U.S Publication No. 20060039364.

37. As to claim 19, Freedman discloses the invention as described in claim 1 above. Freedman does not disclose designing an analysis policy of at least one perception system and its perception sensors. However, Wright discloses designing an analysis policy of at least one perception system and its perception sensors ([0074], lines 3-8).

It would have been obvious to the one skilled in the art at the time of the invention to combine the teaching of Freedman with the teaching of Wright to have the

feature of designing an analysis policy of at least one perception system and its perception sensors. Because it would provide users a better method to manage Multi-protocol label switching ("MPLS") networks, which can provide efficient and/or explicit routing capabilities for Internet Protocol ("IP") networks, which may be a key element in the traffic engineering of those IP networks ([0005], lines 9-13).

38. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Freedman as applied to claim 1 above, in view of Hyun Kim (hereinafter Kim), U.S Patent No. 6484062.

39. As to claim 20, Freedman discloses the invention as described in claim 1 above. Freedman does not disclose determining at least one value of adding at least one sensor to at least one perception system. However, Kim discloses determining at least one value of adding at least one sensor to at least one perception system (column 8, lines 37-40, 44-48).

It would have been obvious to the one skilled in the art at the time of the invention to combine the teaching of Freedman with the teaching of Kim to have a feature of determining at least one value of adding at least one sensor to at least one perception system. Because it would provide users a better system for stress relaxation and an operating method. More specifically, provide a system and operating method which possibly make the computer user relax the stress syndrome by stimulating the

user's nerve organs such as the sense of sight, hearing, feeling or smelling (column 2, lines 6-13).

40. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Freedman as applied to claim 1 above, in view of Yoshida et al. (hereinafter Yoshida), U.S Publication No. 20010014356.

41. As to claim 21, Freedman discloses the invention as described in claim 1 above. Freedman does not disclose providing information relating to volatility of data due to influences of a flow of time. However, Yoshida discloses providing information relating to volatility of data due to influences of a flow of time ([0084], lines 16-21).

It would have been obvious to the one skilled in the art at the time of the invention to combine the teaching of Freedman with the teaching of Yoshida to have a feature for providing information relating to volatility of data due to influences of a flow of time. Because it would provide users a plasminogen activator inhibitor which is effective for improvement of rough skin and external preparation for skin [0007].

42. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Freedman as applied to claim 1 above, in view of Roy Shkedi (hereinafter Shkedi), U.S Publication No. 20080313194.

43. As to claim 22, Freedman discloses the invention as described in claim 1 above. Freedman does not disclose determining at least one time- based economic value of a business given its environmental context. However, Shkedi discloses determining at least one time- based economic value of a business given its environmental context ([0076], lines 7-8).

It would have been obvious to the one skilled in the art at the time of the invention to combine the teaching of Freedman with the teaching of Shkedi to have the feature for determining at least one time- based economic value of a business given its environmental context. Because it would provide users better means for making viable the economic commerce in information attributes ([0020], lines 1-3).

44. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Freedman as applied to claim 1 above, in view of Devadatta V. Bodas (hereinafter Bodas), U.S Publication No. 20040163001, and further in view of Hargrove et al. (hereinafter Hargrove), U.S Publication No. 20060258950.

45. As to claim 25, Freedman discloses the invention as described in claim 1 above. Freedman does not disclose the analysis policy comprising a rate-based perception policy that defines observational frequencies and duty cycles for at least one feature. However, Bodas discloses the analysis policy comprising a rate-based perception policy ([0059], lines 21-24). Bodas does not disclose defining observational frequencies and duty cycles for at least one feature. However, Hargrove discloses defining observational

frequencies ([0085], lines 16-17) and duty cycles for at least one feature ([0085], lines 6-7).

It would have been obvious to the one skilled in the art at the time of the invention to combine the teaching of Freedman, Bodas with the teaching of Hargrove to have the analysis policy comprising a rate-based perception policy that defines observational frequencies and duty cycles for at least one feature. Because it would provide users an optimal effect on the tissues of the brain, while eliminating conscious patient perception of the signal. a means of constantly assessing power spectral density or other frequency related statistics of EEG signals, and using the frequency related statistics from the EEG signals to manage the low frequency component of an AMPWM neurostimulation signal so as to prevent entrainment to any specific frequency, and to distribute energy uniformly (Hargrove [0019,0027]).

46. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Freedman, Bodas and Hargrove as applied to claims 1 and 25 above, in view of Fritz R. Part (hereinafter Part), U.S Publication No. 20080076129.

47. As to claim 26, Freedman, Bodas and Hargrove disclose the invention as described in claims 1 and 25 above. Freedman further discloses a real-time data validation set to determine time for computations ([0043], lines 41-43). Hargrove also further disclose the rate-based perception policy utilizing off-time ([0085], lines 8-10). Freedman, Bodas and Hargrove do not disclose cross-validation means. However, Part discloses cross-validation means ([0234], lines 1-2).

It would have been obvious to the one skilled in the art at the time of the invention to combine the teaching of Freedman, Bodas, Hargrove with the teaching of Part to have the rate-based perception policy utilizing off-time that is determined by cross-validation means on a real time data validation set to determine time for computation. Because it would provide users a better method for identifying a subject having an increased risk of developing an estrogen-related cancer comprising determining which alleles of the genes encoding CYP1B1, COMT, and GSTM1 are present in the genome of the subject so as to determine an estrogen metabolizing enzyme genotype for the individual, and correlating the estrogen metabolizing enzyme genotype of the individual to an increased risk of developing breast cancer [0010].

48. Claims 27, 28, 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freedman as applied to claim 1 above, in view of Palacharla et al. (hereinafter Palacharla), U.S Patent No. 7327954, further in view of Muirhead et al. (hereinafter Muirhead), U.S Publication No. 20070286198.

49. As to claim 27, Freedman discloses the invention as described in claim 1 above. Freedman does not disclose the analysis policy comprising an EVI-based perception policy that determines an expected value of information via a cost-benefit analysis means utilizing at least expected values and cost of analysis values for at least one feature. However, Palacharla discloses the analysis policy comprising an EVI-based perception policy that determines an expected value of information (column 7, lines 46-

50). Freedman and Palacharla do not disclose a cost-benefit analysis means utilizing at least expected values and cost of analysis values for at least one feature. However, Muirhead discloses a cost-benefit analysis means utilizing at least expected values and cost of analysis values for at least one feature ([0279], lines 1-4).

It would have been obvious to the one skilled in the art at the time of the invention to combine the teaching of Freedman, Palacharla with the teaching of Muirhead to have the analysis policy comprising an EVI-based perception policy that determines an expected value of information via a cost-benefit analysis means utilizing at least expected values and cost of analysis values for at least one feature. Because it would provide users a better method for constructing a virtual private network that may replace expensive point-to-point WAN connections and dedicated hardware components (Muirhead [0044]).

50. As to claim 28, Freedman, Palacharla, and Muirhead disclose the invention as described in claim 1 and 27 above. Muihead further discloses the cost of analysis values comprising at least one value proportional to an impact to the computing resources employed by the perception system ([0279], lines 7-10).

The motivation of this claim is as same as the one of claim 27 above.

51. As to claim 30, Freedman discloses real- time computations of expected value of information ([0038], lines 45-49). Freedman does not disclose the EVI-based perception

policy. However, Palacharla discloses the EVI-based perception policy (column 7, lines 46-50).

The motivation of this claim is as same as the one of claim 27 above.

52. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Freedman, Palacharla and Muirhead as applied to claims 1 and 27 above, in view of Pearlman et al. (hereinafter Pearlman), U.S Publication No. 20040175048.

53. As to claim 29, Freedman, Palacharla, and Muirhead disclose the invention as described in claim 1 and 27 above. They do not disclose the EVI-based perception policy employing a context-based cost model to determine the cost of analysis values. However, Pearlman discloses the EVI-based perception policy employing a context-based cost model to determine the cost of analysis values ([0068], lines 1-4).

It would have been obvious to the one skilled in the art at the time of the invention to combine the teaching of Freedman, Palacharla, and Muirhead with the teaching of Pearlman to have the EVI-based perception policy employing a context-based cost model to determine the cost of analysis values. Because it would provide users a better method for encoding and decoding a data set corresponds to an image, which includes a first device for partitioning the subband transformation into first and second sets, for adding the first set into a list of insignificant sets (LIS), and for initializing a list of significant pixels (LSP), a second device for testing the first and second sets for significance with respect to a threshold value, partitioning significant

members of the first and second sets in accordance with first and second partitioning functions, respectively, and adding significant pixels to the LSP, and a third means for refining the quantization of the pixels in the LSP(Pearlman [0015]).

54. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Freedman, Palacharla and Muirhead as applied to claims 1, 27, and 30 above, in view of Bradley C. Love (hereinafter Love), U.S Patent No 6920439.

55. As to claim 31, Feedman, Palacharla, and Muirhead disclose the invention as described in claim 1, 27, and 30 above. The do not disclose the real-time computations processed utilizing a myopic, single step approach for computing a next best set of observations. However, Love discloses the real-time computations processed utilizing a myopic, single step approach for computing a next best set of observations (column 8, lines 45-49).

It would have been obvious to the one skilled in the art at the time of the invention to combine the teaching of Freedman, Palacharla, and Muirhead with the teaching of Love to have the real-time computations processed utilizing a myopic, single step approach for computing a next best set of observations. Because it would provide users an explicit system and a classifier each configured to receive a system state dataset, with the explicit system connected with the classifier, and operative to iteratively perform a combinatory search procedure based on the system state dataset

to develop a next test recommendation for the classifier, whereby the classifier performs the next test to generate an objective weighted score (column 5, lines 23-30).

56. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Freedman, Palacharla, and Muirhead as applied to claims 1 and 27 above, in view of Bondi et al. (hereinafter Bondi), U.S Patent No. 6333979, further in view of Gregory Robert Roelofs (hereinafter Roelofs), U.S Publication No. 20020142843.

57. As to claim 32, Feedman, Palacharla, and Muirhead disclose the invention as described in claim 1 and 27 above. Freedman further discloses the cost of analysis values comprising at least one selected from the group consisting of percentage of CPU utilization values ([0062], line 8). Freedman, Palacharla, and Muirhead do not disclose dollar values, latency values, and user selected preference values. However, Bondi discloses dollar values (column 12 lines 22-23). Freedman, Palacharla, Muirhead, and Bondi do not disclose latency values, and user selected preference values. However, Roelofs discloses latency values ([0035], lines 16-18)., and user selected preference values ([0050], lines 20-23).

It would have been obvious to the one skilled in the art at the time of the invention to combine the teaching of Freedman, Palacharla, Muirhear, and Bondi with the teaching of Roelofs to have the cost of analysis values comprising at least one selected from the group consisting of dollar values, latency values, and user selected preference values. Because it would provide users a better method for routing incoming

voice and/or data communications to communication processing centers based on a destination plan (Bondi: column 1, lines 29-32), provide latency compensating mechanisms to allow high-latency participants in multi-user interactive play to be able to effectively compete with low-latency participants in such games (Roelofs: [0009], lines 1-5).

58. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Freedman, Palacharla, and Muirhead as applied to claims 1 and 27 above, in view of Lawrence L. Bell (hereinafter Bell), U.S Publication No. 20080052213.

59. As to claim 33, Freedman, Palacharla, and Muirhead disclose the invention as described in claims 1 and 27 above. Palacharla further discloses the expected value of information (column 7, lines 46-50). Freedman, Palacharla, and Muirhead do not disclose the cost-benefit analysis means utilizing substantially similar value types for a cost value and a benefit value. However, Bell discloses the cost-benefit analysis means utilizing substantially similar value types for a cost value and a benefit value ([0085], lines 6-7).

It would have been obvious to the one skilled in the art at the time of the invention to combine the teaching of Freedman, Palacharla, and Muirhead with the teaching of Bell to have the cost-benefit analysis means utilizing substantially similar value types for a cost value and a benefit value to calculate the expected value of information. Because it would provide users a better way for assisting the company's

identification of appropriate employees, through the use of a novel modeling method and apparatus (Bell: [0012], lines 1-5).

60. Claims 34, 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freedman, Palacharla, and Muirhead as applied to claims 1 and 27 above, in view of Haft et al. (hereinafter Haft), U.S Publication No. 20060129580.

61. As to claim 34, Freedman, Palacharla, and Muirhead disclose the invention as described in claims 1 and 27 above. They do not disclose the cost-benefit analysis means further comprising at least one utility model that facilitates in analyzing a benefit of determining a value of at least one feature. However, Haft discloses the cost-benefit analysis means further comprising at least one utility model that facilitates in analyzing a benefit of determining a value of at least one feature ([0108], lines 12-15).

It would have been obvious to the one skilled in the art at the time of the invention to combine the teaching of Freedman, Palacharla, and Muirhead with the teaching of Haft to have the cost-benefit analysis means further comprising at least one utility model that facilitates in analyzing a benefit of determining a value of at least one feature. Because it would provide database information of a first database, and to a method for the computer-aided formation of a statistical image of a database (Half: [0001].

62. As to claim 35, Freedman, Palacharla, Muirhead, and Haft disclose the invention as described in claims 1, 27 and 34 above. Haft further discloses the utility model comprising a conditional utility model that alters functionality dependent upon context ([0108], lines 12-15).

The motivation of this claim is as same as the one of claim 34 above.

63. Claims 37, 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freedman, Palacharla, and Muirhead as applied to claims 1 and 27 above, in view of Asghar et al. (hereinafter Asghar), U.S patent No. 6347297.

64. As to claim 37, Freedman, Palacharla, and Muirhead disclose the invention as described in claims 1 and 27 above. They do not disclose the EVI-based perception policy further comprising a probabilistic model. However, Asghar discloses the EVI-based perception policy further comprising a probabilistic model (column 6, lines 46-50.

It would have been obvious to the one skilled in the art at the time of the invention to combine the teaching of Freedman, Palacharla, and Muirhead with the teaching of Asghar to have the EVI-based perception policy further comprising a probabilistic model. Because it would provide users a new hybrid speech recognition system combines Matrix Quantization (MQ) and Vector Quantization (VQ) with Hidden Markov Models (HMMs) and neural network postprocessing to efficiently utilize processing resources and improve speech recognition performance (Asghar: column 3, lines 52-57).

65. As to claim 38, Freedman, Palacharla, Muirhead, and Asghar disclose the invention as described in claims 1, 27, and 37 above. Asghar further discloses the probabilistic model comprising a Hidden Markov Model (HMM) model (column 6, lines 46-50).

The motivation of this claim is as same as the one of claim 37 above.

66. Claims 41, 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freedman, Palacharla, Muirhead, and Asghar as applied to claims 1, 27 and 37 above, in view of Sadiye Zeyno Guler (hereinafter Guler), U.S Publication No. 20040113933.

67. As to claim 41, Freedman, Palacharla, Muirhead, and Asghar disclose the invention as described in claims 1, 27, and 37 above. They do not disclose the probabilistic model comprising a Layered Hidden Markov Model (LHMM) model. However, Guler discloses the probabilistic model comprising a Layered Hidden Markov Model (LHMM) model ([0061], lines 11-15).

It would have been obvious to the one skilled in the art at the time of the invention to combine the teaching of Freedman, Palacharla, Muirhead and Asghar with the teaching of Guler to have the probabilistic model comprising a Layered Hidden Markov Model (LHMM) model. Because it would provide users a better way for retrieving event specific video image analysis including scene analysis processing of a video input stream, scene change detection, camera calibration, and scene geometry

estimation (Guler: [0007-0008]).

68. As to claim 42, Freedman, Palacharla, Muirhead, Asghar, and Guler disclose the invention as described in claims 1, 27,37, and 41 above. Guler further discloses the Layered Hidden Markov Model (LHMM) utilized to substantially reduce re-training of higher level layers when an operating environment change occurs ([0038], lines 1-4).

The motivation of this claim is as same as the one of claim 41 above.

69. Claims 43, 44, 49, 50, 51, 52, 54, 55, 57, 58, 59, 63, 83 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freedman in view of Peter J. Schubert (hereinafter Schubert), U.S Publication No. 20050113983.

70. As to claim 43, Freedman discloses a method of analyzing data, comprising:

obtaining perception evidence for a perception system for a particular context ([0040], lines 43-56, i.e., capturing any information segments in coded data format like voice, video);

analyzing the perception evidence utilizing an analysis policy to determine a perceived system value ([0041], lines 7-9; [0051], lines 35-40,i.e., applying rule based analysis to content data, analyzing the received audio segments).

Freedman does not disclose

employing the perceived system value to limit utilization of computing resources by the perception system.

However, Schubert discloses employing the perceived system value ([0037], lines 4-7) to limit utilization of computing resources by the perception system ([0037], lines 16-20, i.e., consuming a minimum of microprocessor resources).

It would have been obvious to the one skill in the art at the time of the invention to combine the teaching of Freedman with the teaching of Schubert to have a feature for employing the perceived system value to limit utilization of computing resources by the perception system. Because it would provide users for predicting an overturn condition of a vehicle, estimating a roll angle of the vehicle [0008-0009].

71. As to claim 44, Freedman discloses analyzing the perception evidence further comprising: employing, at least in part, learned inferences relating to persistence ([0051], lines 9-12) versus volatility of observational states to provide unobserved perception evidence in lieu of observed perception evidence ([0039], lines 40-43).

72. As to claim 49, Freedman discloses the method of claim 43, further comprising:

employing at least one perception sensor to obtain the perception evidence ([0040], lines 43-56, i.e., captured device 280 capturing audio, video...); and extracting perception evidence pertaining to at least one feature from the perception sensor ([0040], lines 59-61).

73. As to claim 50, Freedman discloses the method of claim 49, further comprising:

selecting what perception sensors are employed to obtain perception evidence ([0045], lines 20-24, i.e., selecting audio segments implying selecting audio sensor) to further optimize the limiting of the computing resources employed by the perception system ([0039], lines 45-49).

74. As to claim 51, Freedman discloses selecting when perception sensors are employed to obtain perception evidence ([0045], lines 20-24, i.e., selecting audio segments implying selecting audio sensor) to further optimize the limiting of the computing resources employed by the perception system ([0039]. lines 45-49).

75. As to claim 52, Freedman discloses at least one perception sensor comprising perception evidence for at least one feature ([0044], lines 45-46, i.e., capturing audio implying microphone device).

76. As to claim 54 Freedman discloses selecting the analysis policy based on optimization of limiting computing resources ([0039], lines 45-49) for obtaining a desired feature ([0055], lines 55-57).

77. As to claim 55, Freedman discloses employing the perceived system value comprising utilizing computing resources when the perceived system value is above a threshold 9[0053], lines 9-10).

78. As to claim 57, Freedman discloses the threshold is a predetermined threshold ([0060], lines 26-28).

79. As to claim 58, Freedman discloses the predetermined threshold is set via a user preference ([0060], lines 26-31).

80. As to claim 59, Freedman discloses the predetermined threshold is set via the perception system based on context ([0060], lines 26-28; [0073], lines 15-16).

81. As to claim 63, Freedman discloses the analysis policy comprising a random selection-based perception policy 9[0062], lines 100-102).

82. As to claim 83, Freedman discloses a device employing the method of claim 43 comprising at least one selected from the group consisting of a computer, a server, and a handheld electronic device ([0038, lines 59-67, i.e., Computer Telephony Integration (CIT) is the use of computers to manage telephone calls…).

83. Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Freedman, Schubert as applied to claims 43 and 44 above in view of Kammerer.

84. As to claim 45, Freedman and Schubert disclose the invention as described in claims 43 and 44 above. They do not disclose the learned inferences based, at least in

part, on a probability distribution model for future states based on at least one previously observed value that is captured by at least one function of time. However, Kammerer discloses the learned inferences based, at least in part, on a probability distribution model ([0085], lines 11-12) for future states based on at least one previously observed value that is captured by at least one function of time ([0085], lines 12-16, i.e., going initially from the start state via the middle state and the end state).

The motivation of this claim is as same as the one of claim 3 above.

85. Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over Freedman, Schubert and Kammerer as applied to claims 43, 44 and 45 above, in view of Wolfram.

86. As to claim 46, Freedman, Schubert, and Kammerer disclose the invention as described in claim 44, 45 and 46 above. They do not disclose the probability distribution model comprising, at least in part, a Gaussian distribution:

$$P(x) = \frac{1}{\left(2\pi\sigma(t)^2\right)^{1/2}} \exp\left\{-\frac{(x-\mu)^2}{2\sigma(t)^2}\right\}$$

where μ is a mean value and σ (t) is a standard deviation at time "t".

However, Wolfram disclose as equation (1).

The motivation of this claim is as same as the one of claim 4 above.

87. Claim 47 is rejected under 35 U.S.C. 103(a) as being unpatentable over Freedman, and Schubert as applied to claim 43 above, in view of Lehmann et al. (hereinafter Lehmann), U.S Publication No. 20020169782.

88. As to claim 47, Freedman and Schubert disclose the invention as described in claim 43 above. Schubert further discloses limiting utilization of the computing resources by the perception system ([0037], lines 16-20, i.e., consuming a minimum of microprocessor resources). However, Freedman and Schubert do not disclose accepting user input to obtain user preferences to establish criteria. However, Lehmann discloses accepting user input to obtain user preferences to establish criteria ([0103], lines 8-10).

It would have been obvious to the one skilled in the art at the time of the invention to combine the teaching of Freedman, Schubert with the teaching of Lehmann to have the feature for accepting user input to obtain user preferences to establish criteria. Because it would provide users profile information received from a plurality of users and a search request received from the first user, where the search request includes desired profile information. The profile information of users associated with the first user is filtered based on the search request and an indication of at least one associated user matching the search request is transmitted to the first user (Lehmann: [0010]).

89. Claim 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over Freedman, Schubert, and Lehmann as applied to claims 43 and 47 above, in view of Brill et al. (hereinafter Brill), U.S Publication No. 20050071766.

90. As to claim 48, Freedman, Schubert, and Lehmann disclose the invention as described in claim 43 and 47 above. They do not disclose the criteria comprising at least one critical task that supersedes analysis of perception evidence for at least one feature in a given context. However, Brill discloses the criteria comprising at least one critical task that supersedes analysis of perception evidence for at least one feature in a given context ([0027], lines 8-18).

It would have been obvious to the one skilled in the art at the time of the invention to combine the teaching of Freedman, Schubert, and Lehmann with the teaching of Brill to have the criteria comprising at least one critical task that supersedes analysis of perception evidence for at least one feature in a given context. Because it would provide users a better method to resist spoofing of a wed crawler to increase data accuracy (Brill: [0009], lines 1-3).

91. Claim 53 is rejected under 35 U.S.C. 103(a) as being unpatentable over Freedman, Schubert as applied to claim 43 above in view of Jindal et al. (hereinafter Jindal), U.S Patent No. 6327622.

92. As to claim 53, Freedman and Schubert disclose the invention as described in claim 43 above. Freedman further discloses optimization of limiting computing resources for a given context ([0039], lines 45-49). Freedman and Schubert do not disclose selecting the analysis policy. However, Jindal discloses selecting the analysis policy (column 14, lines 22-24).

It would have been obvious to the one skilled in the art at the time of the invention to combine the teaching of Freedman and Schubert with the teaching of Jindal to have the feature for selecting the analysis policy based on optimization of limiting computing resources for a given context. Because it would provide users a better way for balancing client (e.g., user) requests among multiple instances of an application (e.g., application program or replicated service) in accordance with a selected policy (column 2, lines 41-45).

93. Claim 56 is rejected under 35 U.S.C. 103(a) as being unpatentable over Freedman, Schubert as applied to claim 43 above in view of Li et al. (hereinafter Li), U.S Publication No. 2040177069.

94. As to claim 56, Freedman and Schubert disclose the invention as described in claim 43 above. They do not disclose employing the perceived system value comprising utilizing computing resources for a feature combination that yields a maximal perceived system value. However, Li discloses employing the perceived system value comprising

utilizing computing resources for a feature combination that yields a maximal perceived system value ([0044], lines 12-16).

It would have been obvious to the one skilled in the art at the time of the invention to combine the teaching of Freedman, Schubert with the teaching of Li to have the feature for employing the perceived system value comprising utilizing computing resources for a feature combination that yields a maximal perceived system value. Because it would provide users the quantitative characterization that can address features such as the color, texture, and shapes included in the image files. Typically in performing a search, a user would select an image file as a basis to be used in the search, and then select one or more particular CBIR algorithms to be used ([0005], lines 6-11).

95. Claim 60 is rejected under 35 U.S.C. 103(a) as being unpatentable over Freedman, Schubert as applied to claim 43 above in view of Bodas.

96. As to claim 60, Freedman and Schubert disclose the invention as described in claim 43 above. They do not disclose the analysis policy comprising a rate-based perception policy. However, Bodas discloses the analysis policy comprising a rate-based perception policy ([0059], lines 21-24).

The motivation of this claim is as same as the one of claim 25 above.

97. Claims 61, 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freedman, Schubert, and Bodas as applied to claims 43 and 60 above, in view of Hargrove and further in view of Part.

98. As to claim 61, Freedman, Schubert, and Bodas disclose the invention as described in claims 43 and 60 above. Freedman further discloses

a real-time data validation set for perception sensors employed by the perception system ([0043, lines 41-43).

determining which perception sensors are providing sensed data and utilizing the sensed data to compute features facilitated by the sensed data ([0040], lines 43-56).

Freedman, Schubert, and Bodas do not disclose

defining observational frequencies and duty cycles via a cross-validation means

However, Hargrove discloses defining observational frequencies ([0085], lines 16-17) and duty cycles ([0085], lines 6-7).

Freedman, Schubert, Bodas, and Hargrove do not disclose a cross-validation means. However, Part discloses a cross-validation means ([0234], lines 1-2).

The motivation of this claim is as same as the one of claim 26 above.

99. As to claim 62, Freedman, Schubert, Bodas, Hargrove and Part disclose the invention as described in claims 43, 60, and 61 above. Hargrove further discloses adapting the observational frequencies ([0085], lines 16-17) and duty cycles for at least one sensor dynamically ([0085], lines 6-7.

The motivation of this claim is as same as the one of claim 61 above.

100. Claim 64 is rejected under 35 U.S.C. 103(a) as being unpatentable over Freedman, Schubert as applied to claims 43 and 63 above in view of Bischoff et al. (hereinafter Bischoff), U.S Publication No. 20060106323.

101. As to claim 64, Freedman discloses

processing at least one analyzed feature to determine output perception data ([0040], lines 71-74).

randomly selecting which features to analyze ([0055], lines 40-44).

Freedman and Schubert do not disclose

determining features available based on available perception sensors employed by the perception system.

However, Bischoff discloses determining features available based on available perception sensors employed by the perception system ([0047], lines 16-21).

It would have been obvious to the one skilled in the art at the time of the invention to combine the teaching of Freedman, Schubert with the teaching of Bischoff to have the feature for determining features available based on available perception sensors employed by the perception system. Because it would provide users a better way to operate the Cardiac Rhythm Monitoring Device without the need for extensive training ([0008], lines 1-4).

102. Claim 65 is rejected under 35 U.S.C. 103(a) as being unpatentable over Freedman, Schubert as applied to claim 43 above in view of Palacharla.

103. As to claim 65, Freedman and Schubert disclose the invention as described in claim 43 above. They do not disclose the analysis policy comprising an EVI-based perception policy. However, Palacharla discloses the analysis policy comprising an EVI-based perception policy (column 7, lines 46-50).

The motivation of this claim is as same as the one of claim 27 above.

104. Claim 66 is rejected under 35 U.S.C. 103(a) as being unpatentable over Freedman, Schubert, and Palacharla as applied to claims 43 and 65 above in view of Wood et al. (hereinafter Wood), U.S Patent No. 6421778.

105. As to claim 66, Freedman, Schubert, and Palacharla disclose the invention as described in claims 43 and 65 above. Palacharla further discloses

utilizing the EVI-based perception policy to derive a cost-benefit analysis value of the feature; the cost benefit analysis utilizing a benefit value and a cost value (column 7, lines 46-50).

Freedman, Schubert, and Palacharla do not disclose

calculating a benefit value for determining a feature;

calculating a cost value for determining the feature

However, Wood discloses

calculating a benefit value for determining a feature (column 7, lines 30-31, 40-42);

calculating a cost value for determining the feature (column 7, lines 30-31, 40-42).

It would have been obvious to the one skilled in the art at the time of the invention to combine the teaching of Freedman, Schubert, and Palacharla with the teaching of Wood to have features for calculating a benefit value for determining a feature; calculating a cost value for determining the feature. Because it would provide user a better method for implementing a modular, application-independent scalability system whose system parameters are initialized by values provided from a scalable application program (column 2, lines 51-57).

106. Claim 67 is rejected under 35 U.S.C. 103(a) as being unpatentable over Freedman, Schubert, Palacharla, and Wood as applied to claims 43, 65, and 66 above in view of Lawrence.

107. As to claim 67, Freedman, Schubert, Palacharla, and Wood disclose the invention as described in claims 43, 65, and 66 above. They do not disclose the benefit value and the cost value calculated employing a substantially similar value type. However, Lawrence discloses the benefit value and the cost value calculated employing a substantially similar value type ([0085], lines 6-7).

The motivation of this claim is as same as the one of claim 33 above.

108. Claim 68 is rejected under 35 U.S.C. 103(a) as being unpatentable over Freedman, Schubert, Palacharla, Wood, and Lawrence as applied to claims 43, 65, 66, and 67 above in view of Bondi and further in view of Roelofs.

109. As to claim 68, Freedman, Schubert, Palacharla, Wood, and Lawrence disclose the invention as described in claims 43, 65, 66, and 67 above. Freedman further discloses a percentage of CPU utilization value ([0062], line 8). Freedman, Schubert, Palacharla, Wood, and Lawrence do not disclose the value type comprising at least one selected from the group consisting of a dollar value, a latency value, and a user-selected value. However, Bondi discloses the value type comprising at least one selected from the group consisting of a dollar value (column 12, lines 22-23). Freedman, Schubert, Palacharla, Wood, Lawrence, and Bondi do not disclose a latency value, and a user-selected value. However, Roelofs discloses a latency value ([0035], lines 16-18), and a user-selected value ([0050], lines 20-23).

The motivation of this claim is as same as the one of claim 32 above.

110. Claims 69, 71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freedman, Schubert, and Palacharla as applied to claims 43 and 65 above in view of Haft, and further in view of Asghar.

111. As to claim 69, Freedman, Schubert, and Palacharla disclose the invention as described in claims 43 and 65 above. They do not disclose the EVI-based perception policy further comprising at least one selected from the group consisting of a utility model and a probabilistic model. However, Haft discloses the EVI-based perception policy further comprising at least one selected from the group consisting of a utility model ([0108], lines 12-15). Freedman, Schubert, Palacharla, and Haft do not disclose a probabilistic model. However, Asghar discloses a probabilistic model (column 6, lines 46-50).

The motivation of this claim is as same as the one of claim 37 above.

112. As to claim 71, Freedman, Schubert, and Palacharla, Haft, and Asghar disclose the invention as described in claims 43, 65, and 69 above. Asghar further discloses the probabilistic model comprising a Hidden Markov Model (HMM) (column 6, lines 46-50)

The motivation of this claim is as same as the one of claim 37 above.

113. Claims 74, 75 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freedman, Schubert, Palacharla, Haft, and Asghar as applied to claims 43, 65, and 69 above in view of Guler.

114. As to claim 74, Freedman, Schubert, Palacharla, Haft, and Asghar disclose the invention as described in claims 43, 65, and 69 above. They do not disclose the

probabilistic model comprising a Layered Hidden Markov Model (LHMM). However, Guler discloses the probabilistic model comprising a Layered Hidden Markov Model (LHMM) ([0038], lines 1-4).

The motivation of this claim is as same as the one of claim 41 above.

115. As to claim 75, Freedman, Schubert, Palacharla, Haft, Asghar, and Guler disclose the invention as described in claims 43, 65, 69, and 74 above. Guler further discloses employing lower level layers of the LHMM to mask higher level layers from needing to be re-trained when the perception system is changed to a new environment ([0038], lines 1-4).

The motivation of this claim is as same as the one of claim 41 above.

116. Claim 76 is rejected under 35 U.S.C 103 (a) as being unpatentable over Freedman, and Schubert as applied to claim 43 above, in view of Kim.

117. As to claim 76, Freedman, and Schubert disclose the invention as described in claim 43 above. They do not disclose determine benefits of additional perception sensors to a perception system. However, Kim discloses determine benefits of additional perception sensors to a perception system (column 8, lines 37-40, 44-48).

The motivation of this claim is as same as the one of claim 20 above.

118. Claim 77 is rejected under 35 U.S.C 103 (a) as being unpatentable over Freedman, and Schubert as applied to claim 43 above, in view of Wright.

119. As to claim 77, Freedman and Schubert disclose the invention as described in claim 43 above. They do not disclose designing a perception system to optimally limit utilization of computing resources. However, Wright discloses designing a perception system to optimally limit utilization of computing resources ([0074], lines 3-8).

The motivation of this claim is as same as the one of claim 19 above.

120. Claim 78 is rejected under 35 U.S.C 103 (a) as being unpatentable over Freedman, and Schubert as applied to claim 43 above, in view of Yoshida.

121. As to claim 78, Freedman and Schubert disclose the invention as described in claim 43 above. They do not disclose providing information utilizing knowledge of volatility of data due to influences of a flow of time to re-determine perceptions at appropriate intervals. However, Yoshida discloses providing information utilizing knowledge of volatility of data due to influences of a flow of time to re-determine perceptions at appropriate intervals ([0084], lines 16-21).

The motivation of this claim is as same as the one of claim 21 above.

122. Claim 80 is rejected under 35 U.S.C. 103(a) as being unpatentable over Freedman, in view of Yoshida.

123. As to claim 80, Freedman discloses a data analysis system, comprising:

a first component (Fig.2B, multi segment interaction capture device 280; [0040], line 43) that receives data queries relating to obtained data ([0040, lines 43-56), i.e., capturing any information segments in a coded data format such as audio data, video data…); and

a second component (Fig.2B, rule based analysis engine 218; [0041], lines 1-2) that analyzes persistence of at least one state of obtained data ([0041], lines 7-9; [0051], lines 35-40, i.e., applying rule based analysis to content data, analyzing the received audio segments).

Freedman does not disclose volatility of the data over time to establish reasonableness in timing of at least one query reply. However, Yoshida discloses volatility of the data over time to establish reasonableness in timing of at least one query reply ([0101], lines 3-11, i.e., this application was daily repeated for 4 weeks. After 4 weeks passed improvement of pimples at a tested portion relative to the condition before beginning to test was evaluated by panelist themselves).

It would have been obvious to the one skilled in the art at the time of the invention to combined the teaching of Freedman with the teaching of Yoshida to have a second component that analyzes persistence of at least one state of obtained data with regard to volatility of the data over time to establish reasonableness in timing of at least one query reply. Because it would provide users a plasminogen activator inhibitor which is effective for improvement of rough skin and external preparation for skin and an

external preparation for skin [0007].

124. Claim 81 is rejected under 35 U.S.C. 103(a) as being unpatentable over Freedman, in view of Palacharla.

125. As to claim 81, Freedman discloses a data packet transmitted between two or more computer components that facilitate perception ([0040], lines 43-47, i.e., capturing device 280 captures information segments in a coded data format like audio data 282 implying packet transmitted between two components, capturing device and microphone), employed to facilitate limiting utilization of computational resources ([0039], lines 45-49, reducing size and cost on computer resources). Freedman does not disclose the data packet is comprised of, at least in part, information relating to a system that determines, based, at least in part, on expected value of information. However, Palacharla discloses the data packet is comprised of, at least in part, information relating to a system that determines, based, at least in part, on expected value of information (column 7, lines 46-50).

It would have been obvious to the one skilled in the art at the time of the invention to combine the teaching of Freedman with the teaching of Palacharla to have the data packet is comprised of, at least in part, information relating to a system that determines, based, at least in part, on expected value of information. Because it would provide users a better method for optical supervisory signaling includes determining a wavelength channel status (WCS) value, a wavelength channel failure (WCF) value,

and a wavelength channel lit (WCL) value for each one of multiple data channels serviced by an optical communication node, including communicating the values to a second optical communication node (column 1, lines 29-35).

Conclusion

126. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Trainum et al.	US 20070033154
Trivedi et al.	US 20060187305
Hiroaki Hattori	US 5774848

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BANGLONG TRAN whose telephone number is (571)270-3931. The examiner can normally be reached on Monday-Friday 8:00 a.m.-5:00p.m, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton B. Burgess can be reached on (571)272-3949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/B. T./
Examiner, Art Unit 2458

/Joseph E. Avellino/

Primary Examiner, Art Unit 2446